

Abstract of the Disclosure

The method for manufacturing a CMOS image sensor is employed to enhance an optical property and an electrical property structuring a double gate insulator in a pixel array and a single gate insulator in a logic circuit. The method includes steps of: preparing a semiconductor substrate incorporating therein a p-type epitaxial layer, wherein the semiconductor substrate is divided into two parts of which one part is defined as a pixel array and the other part is defined as a logic circuit; forming a first gate insulator on a top face of the p-type epitaxial layer; forming a mask on a top face of the first gate insulator in the pixel array; removing the first gate insulator in the logic circuit by using the mask; removing the mask in the pixel array; forming the second gate insulator on the top face of the first gate insulator in the pixel array and a top face of the p-type epitaxial layer in the logic circuit; and forming a photodiode and a plurality of transistors in the pixel array and at least one transistor in the logic circuit for processing a signal from the pixel array.